

IN THE CLAIMS

1. (Currently Amended) A multi-channel digital data sending-out apparatus

comprising:

management means for supervising ~~the~~ information gathered from at least one of an information source;

programming means for supervising ~~the~~ information of ~~the material~~ digital data being sent and ~~programming~~ controlling the progress of the digital data to be sent out;

registering means for registering the information of the ~~materials~~ digital data to be sent out;

holding means for holding ~~a plurality of said materials~~ the digital data;

sending-out means for sending out the ~~plural materials~~ digital data held by said holding means to a transmission path as a multi-channel digital data; ~~and holding means for holding a plurality of said materials; and~~

connection means for interconnecting said management means, programming means, registering means, holding means and the sending-out means to permit each of ~~these~~ said means to access at least one ~~an~~ other of said means.

2. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 1, wherein said sending-out means comprises:

first sending-out means for doing sending processing;

second sending-out means for doing sending processing; and

switching means for switching one of the first sending-out means or the second sending-out means to the other if one of said first or second ~~one of the~~ sending-out means is in disorder.

3. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 1 further comprising:

send-out management means for ~~supervising~~ controlling the sending-out of multi-channel digital data; and

multi-channel monitoring means for monitoring the sending-out of the multi-channel digital data.

4. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 1 further comprising:

conversion means for converting the format of the ~~plural materials~~ digital data held by said holding means into a transmission format, ~~by software~~ and for multiplexing time information, service identification information, and the service management information ~~thereon~~ to generate a stream which is ~~outputted~~ sent out.

5. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 4, wherein said conversion means ~~includes~~ comprises:

auxiliary holding means for holding at least a two-day installment ~~installments~~ of the digital data materials, progress information and the system configuration information ~~held by said holding means~~.

6. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 5, wherein said system configuration information is updated using a portion of ~~the~~ a file name thereof.

7. (Currently Amended) The multi-channel digital data sending-out apparatus

according to claim 4, wherein said conversion means ~~includes~~ comprises:

current operating system conversion means ~~in an actually working state~~;  
and

stand-by conversion means ~~worked in substitution~~ to be substituted for  
said current operating system conversion means in case of a malfunction of the  
current operating system malfunctioning thereof.

8. (Currently Amended) A multi-channel digital data sending-out method  
comprising:

a management step for supervising ~~the~~ information gathered from at least  
one of an information source;

a programming step for supervising the information of ~~the material~~ digital  
data being sent and ~~programming~~ controlling the progress of the digital data to be  
sent out;

a registering step for registering the information of the ~~material~~ digital  
data to be sent out;

a holding step for holding ~~a plurality of said materials~~ the digital data;

a sending-out step for sending out the ~~plural materials~~ digital data held by  
said holding means to a transmission path as multi-channel digital data; and

a connection step for interconnecting the processing operations of said  
management step, programming step, registering step, holding step and the  
sending-out step so that the processing operation at each of said steps will be  
associated with the processing operation at least one ~~an~~ other of said steps.

Cont  
A'

9. (Currently Amended) A multi-channel digital data sending-out apparatus comprising:

holding means for a holding ~~a plurality of materials~~ digital data to be sent out;

reproducing means for reading out and reproducing the ~~materials~~ digital data held by said holding means;

encoding means for real-time encoding of the materials digital data reproduced by said reproducing means;

conversion means for converting the format of ~~said plural materials~~ the digital data held by said holding means or the ~~plural materials~~ digital data encoded in real-time by said encoding means into a format for transmission;

sending-out means for sending out the ~~materials~~ digital data converted by said conversion means to the transmission path as multi-channel digital data; and

connection means for interconnecting said holding means, reproducing means; encoding means; conversion means and sending-out means to permit each of ~~these~~ said means to access ~~an~~ at least one other of said means.

10. (Currently Amended) The multi-channel data sending-out apparatus according to claim 9, wherein said conversion means multiplexes ~~the~~ time information, service identification information and ~~the~~ service management information ~~on said materials of said digital data~~ into a ~~sole~~ single stream.

11. (Currently Amended) A multi-channel digital data sending-out method comprising:

a holding step for holding ~~a material~~ digital data to be sent out;

CONT  
A'

a reproducing step for reading out and reproducing the digital data  
~~material~~ held by said holding step;

an encoding step for real-time encoding of the digital data ~~material~~  
reproduced by said reproducing step;

a conversion step for converting the format of ~~said plural materials~~ the  
digital data held by said holding means or the ~~plural materials~~ digital data  
encoded in real-time by said encoding step into a format for transmission;

a sending-out step for sending out the ~~materials~~ digital data converted by  
said conversion step to ~~the~~ a transmission path as multi-channel digital data; and

a connection step for interconnecting the processing operations of said  
holding step, reproducing step, encoding step, conversion step, and the sending-  
out step so that the processing operation at of each of said steps ~~will be~~ is  
associated with the processing operation at least one ~~an~~ other of said steps.

12. (Currently Amended) A multi-channel digital data sending-out apparatus  
comprising;

holding means for holding ~~a plurality of materials~~ digital data to be sent  
out;

conversion means for converting the format of ~~said plural materials~~ the  
digital data held by said holding means into a format for transmission;

a sending-out ~~step~~ means for sending out the ~~materials~~ digital data  
converted by said conversion ~~step~~ means to ~~the~~ a transmission path as multi-  
channel digital data;

monitoring means for monitoring ~~materials~~ digital data read out from said holding means, ~~materials~~ digital data converted by said conversion means or ~~materials~~ digital data said sent out by said sending-out means; and

supplying means for supplying the ~~materials~~ digital data read out from said holding means, ~~materials~~ digital data converted by said conversion means or ~~materials~~ digital data sent out by said sending-out means.

13. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 12, wherein said monitoring means further monitors said ~~materials~~ digital data transmitted to the transmission path from said sending-out means, received and demodulated.
14. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 12, wherein said monitoring means includes detection means for detecting ~~the~~ a level of the digital data ~~each material~~.
15. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 14, wherein said detection means issues an alarm if said ~~materials~~ digital data ~~substantially are~~ is not monitored for longer than a predetermined period.
16. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 12, wherein said sending-out means comprises:
- first sending-out means for ~~doing~~ performing sending-out processing;
- second sending-out means for ~~doing~~ performing sending-out processing;
- and

Cont  
A'

switching means for switching ~~ones for~~ from the first sending-out means or the second sending-out means to the other of said first and second sending out means in the event of a malfunction of either said first or second sending out means if said one of the sending-out means is in disorder.

17. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 16, wherein said monitoring means includes a switch for selecting ~~materials~~ digital data to be monitored, and wherein said switch is being ~~controlled~~ responsive to ~~switching by~~ said switching means.
18. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 12, wherein said monitoring means for monitoring the ~~material~~ digital data converted by said conversion means displays ~~the~~ information concerning ~~a material~~ digital data converted ~~based on a progress table~~ by said conversion means and sent out, and ~~a material~~ digital data which is to be converted and sent out, in a progress table.
19. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 12 further comprising:
- reproducing means for reproducing ~~a material~~ digital data transmitted from said sending-out means to the transmission path, and wherein the reproduced digital data is designated on the progress table.
20. (Currently Amended) A multi-channel digital data sending-out method comprising:
- a holding step for holding ~~a plurality of materials~~ digital data to be sent out;

Cont  
A1

a conversion step for converting the format of ~~said plural materials~~ the digital data held by said holding step into a format for transmission;

a sending-out step for sending out the ~~materials~~ digital data converted by said conversion step to ~~the~~ a transmission path as multi-channel digital data;

a monitoring step for monitoring ~~materials~~ the digital data read out from said holding step, ~~materials~~ digital data converted by said conversion step or digital data ~~materials~~ sent out by said sending-out step; and

a supplying step for supplying the ~~materials~~ digital data read out from said holding step, ~~materials~~ digital data converted by said conversion step or ~~materials~~ digital data sent out by said sending-out step.

21. (Currently Amended) A multi-channel digital data sending-out apparatus comprising:

programming means for supervising the information of digital data a ~~material~~ to be sent out, programming the digital data to be sent out as to its progress, and for generating ~~the~~ progress information;

holding means for holding the information ~~on~~ of the ~~materials~~ digital data, the progress information, and any other information necessary for sending out the ~~materials~~ digital data;

conversion means for converting the format of the ~~plural materials~~ digital data into a format for transmission;

sending-out means for sending out the ~~plural materials~~ digital data converted by said conversion means to ~~the~~ a transmission path as multi-channel digital data; and

Cont  
A'



monitoring means for monitoring said programming means, conversion means or said sending-out means as to malfunctioning thereof so that required the information held by said holding means ~~and which is currently required will be~~ is supplied to said programming means, conversion means or said sending-out means.

22. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 21, wherein said sending-out means comprises;

first sending-out means for ~~doing~~ performing sending processing;

second sending-out means for ~~doing~~ performing sending processing; and

switching means for switching one of the first sending-out means or the second sending-out means to the other if ~~said~~ one of the first or second sending-out means is in disorder.

23. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 22, wherein said first sending-out means and ~~the~~ said second sending-out means monitor each other so that, if one of the first sending-out means and the second sending-out means ~~is in disorder~~ malfunctions, the other ~~advises~~ signals said monitoring means ~~of that effect~~.

24. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 22, wherein the one of said first sending-out means or ~~the~~ said second sending-out means that is ~~actually~~ operating, advises said holding means in a pre-set manner.

25. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 21, wherein said conversion means comprises: ~~is made up of~~

a current operating system converting means; ~~in an actually working state~~  
and

stand-by ~~exchanging~~ converting means ~~worked in substitution for said~~  
~~current operating system converting means~~ in case of malfunctioning of the  
current operating system converting means.

26. (Currently Amended) The multi-channel digital data sending-out apparatus according to claim 21, wherein said conversion means includes auxiliary holding means for holding, ~~for assurance sake,~~ at least a one-day installment of the information held by said holding means.

27. (Currently Amended) A multi-channel data sending-out method comprising:

a programming step for supervising the information of ~~a material~~ digital data to be sent out, for programming the digital data to be sent out as to its progress, and for generating ~~the~~ progress information;

a holding step for holding the information ~~on the materials~~ of the digital data, the progress information and any other information necessary for sending out the ~~materials~~ digital data;

a conversion step for converting the format of the ~~plural materials~~ digital data at said holding step into a format for transmission;

a sending-out step for sending out the ~~plural materials~~ digital data converted by said conversion means to ~~the~~ a transmission path as multi-channel digital data; and

a monitoring step for monitoring errors in said steps so that, if errors occur in the processing in any of the above steps, the information held in said holding

cont  
A'

CONT  
A'

step ~~and which is currently required~~ will be presented for and utilized in  
processing in each of said steps.

Claims 28-34 (Cancelled)

---